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CASES OF DIPHTHERIA OCCURRING IN BOSTON.

[Read before the Boston Society for Medical Observation, March 5th, 1860, and communicated for the Boston Medical and Surgical Journal.]

BY HENRY K. OLIVER, MD.

On the 19th of November, 1859, I was called to a child of ~~-----~~ McCarthy, living at 119 Cambridge St. The family, consisting of husband, wife—both intelligent persons—and six children, the eldest aged 11 years and 5 months, and the youngest a child in arms, had occupied their present rooms for the previous eight years. These rooms were in the third story, and three in number; a large one in front, one as large as the front room at the rear, and one smaller between, all communicating with each other, and used, the front as a kitchen, sitting-room, &c., and the two others as sleeping rooms. The drains, privy, &c., were represented as in good condition. The entries and the rooms themselves were more cleanly kept than usual among the Irish. Four children, in two beds, slept in the rear room. The two youngest slept with their parents in the middle room. General health of parents and children very good. Have good food, and in sufficient quantity. Three years previously, all the children—five in number—had scarlet fever severely, under the care of Dr. Townsend. In one of them the disease was fatal. In all, the throat was a great source of complaint. At the same time, four children of other families in the house were ill of the same disease.

The four eldest have attended school regularly; the three youngest the primary school, and the eldest a higher school, and in a different locality. No case of disease of the throat is known to have been in the schools or in the vicinity of present residence.

To anticipate a little. Elizabeth, aged 11 years and 5 months; Anna, aged 8; George, aged 5, and Isabella, aged 3 years, had the disease in the order in which they are named. Of these, Anna, Elizabeth and George died in the order in which they are named, after being sick respectively 4 days, 3½ weeks, and 7 weeks. The

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baby probably had the disease slightly. James, aged 10 years, did not show the slightest symptom, although he continued to sleep with his brother for some time after the latter was taken ill. It may be proper to premise here, also, that three children of a family residing on the same floor, and adjoining one of the rooms, escaped the disease. They were not, themselves, allowed communication with the McCarthy children, but the mother came in regularly to inquire after their health.

My attendance was sought for Anna, as before mentioned, on the 19th Nov. Elizabeth was considered convalescent. The history of the disease in the former was given as follows. She complained, on the 17th inst., of sore throat. The face was swollen. Not much fever. "In bed and out." Appetite small. Has taken only liquids, and with much difficulty. At the time of my visit, the child was up and dressed. The face and sides of throat red, hot and much swollen. Mouth, half open, showing the tongue somewhat swollen, and with a thick, dirty coat. Breath offensive. Breathing quickened, but not labored. Saliva running freely from mouth. The swelling of the parts rendered it impossible to get a view even of the soft palate.

Never having seen a case of diphtheria, I was naturally puzzled at the appearances before me. My first inquiry was, whether the child had been taking mercury, as she looked like a subject of severe salivation. No remedies of any kind had, however, been employed. I prescribed an emollient wash for the mouth, and ordered cold applications to be made to the throat. On the 20th, the symptoms were not alleviated, but the child seemed no worse. She was up, and walking about. On the 21st, she came up to the breakfast table between eight and nine o'clock, looked at the food, and then turned and lay down on the bed. A short time after, the mother's attention was drawn to her by an appearance of lividity, and, as she seemed to grow ill very fast, a physician was sent for, who arrived soon after the death of the patient, which occurred at 9 $\frac{1}{4}$ o'clock. The death was quiet; as was described, "a quiet sinking away."

At this sudden termination of the disease, my attention was directed to Elizabeth, who, although apparently well, still, judging from her speech, evidently had some trouble in the throat. She had already been sick two weeks, but without medical advice. The chief complaint had been the throat, with occasional pain in the right ear. Swallowed with difficulty, and chiefly liquids. Coughed considerably; expectoration stringy and difficult. At times manifested a disposition to lie on bed during the day. On examination of the throat, I found a white patch on the soft palate of right side, of about the size of the finger nail. On close and repeated examination, this appeared more like a slough than a false membrane. Its edge appeared to be partially detached, and there seemed to be loss of substance beneath. The parts around the patch

were of deep crimson color, which extended to tonsil and greater part of soft palate. A gargle of tannin was ordered, and, in my inability to attend the subsequent day on account of illness, Dr. C. G. Page took charge of the patient. Dr. P. touched the throat with a solution of nitrate of silver, gr. xv. to the ounce, and "a portion of the slough and shreds of a membranous character were thrown off." The slough was touched on four successive days with the solid nitrate, and chlorate of potash given internally, when, the throat being in good condition, and the child seeming well, Dr. Page discontinued his visits.

About a week subsequent, namely, on the 1st of December, I was summoned by the message that the child had become very ill. Upon my arrival at the house, I learned that she had kept the bed the day previous, somewhat dejected. There had been considerable thirst, and some vomiting. I found her in bed, uneasy, and asking for water continually. Countenance somewhat livid. Pulse very small and irregular, 188. Hands and feet cold. Throat well, except slight redness. No slough to be seen. Tongue covered with a thick, black coat. No cough. Breathing quick, but not labored. Ordered wine freely.

Dec. 2d, 11, A.M.—No sleep. Great uneasiness. Thirst the same. Has taken the wine freely and retained it. Vomited only once. Hands and cheeks cold; says she feels hot. Tongue black, with white curdy spots. Says "head swims." Has been wandering somewhat. No pulse. Died at 11½ o'clock.

An autopsy was allowed, and in my absence again, Dr. Page made it the day following, Dr. Minot being present. The chest and throat only were examined. In the left cavity of the pleura about two ounces of serum. Lungs rather red, but hardly to be called congested. Trachea red in patches; portions of mucous membrane at irregular intervals covered with a plastic exudation, in some places quite thick and strong, but in others soft and easily wiped off. Some congestion of pharynx. Epiglottis normal.

George, aged 4 years and 8 mos., was the one next attacked. The first symptom noticed was vomiting, which occurred on the 24th Nov., a little more than two weeks from the commencement of the disease in the child first attacked. Up to that time he had been as well as usual. Was able to take his breakfast and dinner on the 25th, but seemed feverish and coughed somewhat. The throat was also somewhat swollen. On the 26th, there was some fever, and the skin was red. No slough on membrane or tonsils. Solution of chlorate of potash was ordered.

27th.—A small spot on left tonsil, which was touched with solid nitrate. Feverish. Pulse 120. Skin red at times, like scarlatina. Wanders somewhat. Tongue with thick white coat, and papillæ red.

28th.—Slough larger; touched with the solid nitrate.

29th.—Slough seems to have extended back to posterior fauces.

30th.—Slept well last night, and seems better to-day. Occasional complaint of ear.

For two or three weeks subsequent to the last date, the child seemed pretty well, though rather weak, especially in the lower limbs, walking with considerable difficulty at times. The throat got well, and ceased to be a source of complaint. Stimulating liniments and friction along the spinal column were employed, and tinct. ferri muriat. given internally. But trifling benefit, however, was noticed in the lower limbs.

For a few days previous to his death, which occurred on the 10th January, he seemed sleepy, and kept his bed most of the time, occasionally, however, crawling out on to the floor. The lower extremities had become very much weaker, and the child could not stand upright. On the day of his death his father left him, apparently no worse, at 2½ o'clock, to ask some question of me at my office. He returned, in about an hour, to find his child dead. During his absence, the mother heard her name called; she turned, and, noticing a queer expression of the eyes, went to the bed, when the little one died, almost instantly, before her. There was no struggling for breath, or convulsion of any kind. The next day Dr. Jacob Bigelow saw the body, and received the history of the case and of those which had preceded it. His opinion will be found below.

Isabella, aged 3 years, was not attacked with any prominent symptom, but fell ill very gradually. About the 1st December was the time that attention was first drawn to her. The throat was the seat of complaint, though no lesion or exudation was visible. There were, also, some complaint of right ear, some difficulty of swallowing, and slight cough. The tongue was coated, and the papillæ red. Respiration quiet. Cold applications to throat, emollient gargles, and the tinctura ferri muriatis internally, were the remedies employed. Dejection of spirits and an inclination to lie down were reported occasionally, and great prostration was a prominent symptom throughout. Gradual improvement, however, took place, when the mother, being worn down with constant watching, consented to have the child removed to the Hospital, which it entered 18th January. At that Institution gradual improvement took place until the 5th February, when she was discharged, "well."

In the case of the child in arms, it was never certain that the disease was present at all, although there were some symptoms about the throat, leading the mother to make applications there, and some degree of debility, lasting a considerable time. It took wine and tonics.

Without designing to enlarge upon the subject of diphtheria, it will be interesting to inquire whether these cases throw any light upon the origin or nature of the disease. With regard to its origin, in this instance, as in so many others, the question must remain undecided. The locality, although tenanted by poor families,

was, in cleanliness, so far above very many others in the vicinity, that the whole blame cannot reasonably be laid to a malarious influence. Moreover, as before stated, no other person in the house, young or adult, was attacked with the disease. Add to this the fact that the victims were, up to the time of their illness, in the possession of robust health, and the source of the trouble is made still more obscure. Writers on the subject of diphtheria, moreover, express widely opposing opinions with regard to the influence of local causes. Dr. Edward Ballard (*Med. Times and Gazette*, July 23, 1859) gives statistics of the connection of diphtheritic sore throat with local causes of disease. The conclusion is, that, in more than half the houses which were examined, there was some defect or other in the sanitary arrangements, or in the surroundings of the patient. On the other hand, Dr. Geo. Bottomly, in the *British Medical Journal*, July, 1859, says that in the months of July and August, 1856, there were fifty cases, of the most malignant form, in the Orphan Asylum under his charge. This institution stood alone, in a most healthy situation. The rooms were lofty and spacious, and every attention paid to ventilation. He adds, "that does away with the supposition of its being confined to ill-drained, low and swampy situations." Dr. Thos. H. Smith (*British Medical Journal*, July, 1859) says, "It has not, in my experience, selected the most malarious spots, but when it has done so the cases have been most urgent."

Another mooted point is, whether diphtheria has any relation to scarlatina. All of these children had had this disease, three years previously, and a second attack is admitted to be very rare. Dr. Willan only met with a single instance in 2000 cases, and Bouchut says that he has never met with a well authenticated case at all. In one of the children there was, it is true, an eruption resembling scarlatina, but it was short lived and not too distinct. Dr. Bigelow inquired particularly in this regard, and was not at all disposed to connect the symptoms with the disease in question. His remarks were, that he had never before seen similar cases, but that they resembled, more than anything else, the malignant sore throat of scarlet fever.

Was the disease croup, or had it any relation to this affection? In no one instance was the breathing labored. The speech was clear, except in the first child, where the great swelling of the mouth rendered any enunciation impossible. Except in the latter instance, also, in which the immediate cause of death is doubtful—it may have been toxemic in nature, or it may have been cedema of the parts—there was no appearance of asphyxia. Death occurred quietly, though suddenly, and after the lesions in the throat had been resolved. The membrane found upon the mucous membrane of the tonsils, was not the tough membrane of croup; and that found lining the air-passages, at the *post-mortem* examination of the eldest child, was, in general, cheesy in character, and in neither

the larynx nor in the secondary ramifications of the bronchi, into which it extended, was it of a character liable, or in that quantity sufficient, to obstruct the passage of air. It will be noticed that in the second case mention is made of a slough, and not of a membrane. I have, however, since reading Bretonneau's remarks in this regard, who says that "the supposed sloughs are not portions of gangrenous mucous membrane, but exudations upon its surface," chosen to consider it rather a membrane than a slough. Mr. Hutchinson also, in the *Medical Times and Gazette*, says the same thing, and gives a case in point, in which he peeled the supposed gangrenous portion easily, and without causing bleeding, from a deeply red, shining, but otherwise unaffected tissue beneath.

The manifestly contagious nature of the disease under consideration is a no less strong reason for separating it from croup. In Dr. Bullard's cases, out of 47 families, there were only 15 in which the other members all remained healthy; and in no case where separation from the sick person had been effected early in the disease, has he noticed that it has spread to the separated individuals. Of course, it may be argued, on the other hand, that all the members of a family are equally exposed to the operation of local causes of disease. In the cases here recorded, however, three children living on the same floor were all exempt, being carefully kept from associating with the children attacked.

All writers, I think, agree in this, that diphtheria is a constitutional disease, having its lesion in the throat. The sudden fatal termination in these cases, when convalescence seemed well-established, is a reasonable proof of this. In relation to croup, however, there has not been, as yet, any reasonable ground for believing it anything more than a local disease. Moreover, some other symptoms, such as the partial paralysis, the soreness of the throat in swallowing, the fœtor of the breath, and the enlargement of the glands of the neck in diphtheria, tend still more to separate the two diseases. In conclusion, it may not be improper to say that during the whole course of the malady in this instance, the idea of croup never entered the mind of any of the gentlemen who attended or saw the cases.

CROUP—TRACHEOTOMY—RELIEF FOR A TIME—DEATH.

By DAVID P. SMITH, M.D., SPRINGFIELD, Ms.

[Communicated for the Boston Medical and Surgical Journal.]

CASE I.—Dec. 12, 1855, I saw Master C., aged 6 years, who was suffering from the symptoms of aggravated tonsillitis. He had had enlarged tonsils for two years, and the previous spring part of one had been removed, to give relief to the mechanical difficulty of breathing. Fearing complete suffocation if there was much tumefaction, I at once put him upon a vigorous course of

treatment, consisting of emetics of ipecac and zinc, tinct. bloodroot, a little calomel, and when the breathing was very labored turpeth mineral to free vomiting, and applications of nitrate of silver. Sleep was procured by opiates whenever he seemed exhausted. He went on very well until the sixth day, when he coughed up what, from the report of his parents, must have been false membrane. All this time he was up, with his clothes on, playing about the floor. On the eighth day from the commencement of the disease, his symptoms began to increase in intensity, and his cough to assume the peculiar croupy sound. Vomiting was produced several times, with turpeth mineral, but no improvement followed. This evening, Dr. — saw him in consultation. He continued growing worse until the next (Friday) evening, when he seemed near his end. Dr. — was now added to our consultation. Death seeming inevitable, we proposed tracheotomy, and, with the parents' consent, preparations were made to operate. Anticipating some trouble, for the child was short-necked and fat, Dr. — volunteered to go for more assistance. During his absence, the child rapidly choked up. Desiring the father to hold up the boy, just as he appeared to have breathed his last, I made the first incision. A slight effort at inspiration followed, then the head fell forward upon my left hand, the index finger of which was in the wound. Dr. — kindly and ably assisting me and throwing back the child's head, I hastily opened the trachea, and inserting a catheter inflated the lungs. With the assistance of Drs. — and —, who then entered, a double silver catheter was inserted into the trachea, through which respiration was easily performed. So near death, however, did the child come, that at least one quarter of an hour elapsed before it breathed without assistance. This was at midnight; the following morning, the little fellow was sitting up in bed, tossing about his playthings. He seemed, for a time, perfectly free from disease. Early in the afternoon, however, he began to be restless, and gradually grew worse, breathing short and struggling for breath, until his death, which occurred at 6½ o'clock the following morning—30½ hours after the operation.

On *post-mortem* examination, we found a tubular false membrane both above and below the opening into the trachea, which was through the two upper rings. This tube of false membrane extended far down into the lungs.

CASE II.—March 18th, 1856. Willie —, aged 5 years, was taken with croup in the night. Very energetic treatment was had recourse to by Dr. —. I was asked to see him about midnight. Drs. — and — saw him the next day; but medical treatment seemed of little avail, and he rapidly grew worse, until at noon, about 13 hours after the commencement of the disease, in full consultation, it was determined that tracheotomy should be performed. A paroxysm of dyspnoea, amounting almost to actual suffoca-

tion, hastened us, and in the midst of his convulsive struggles for breath I commenced the operation, making my first incision high in the neck, so as to avoid the thyroid body, and, despite the struggles of the child and his convulsive attempts at breathing, working downwards, I got my left forefinger between the sternohyoid muscles, which felt like iron wires, so convulsively were they drawn. The trachea was then with some difficulty opened, through the first and second rings, and a tube inserted. The breathing immediately became calm and placid, and the little fellow sank into quiet rest. In the course, however, of a few hours, his pulse became quick and hard, restlessness and shortness of breath increased, and he gradually grew worse and expired about 15 hours after the operation.

On *post-mortem* examination, we found the windpipe, above the opening made by the operation, perfectly occluded. Below the opening, the mucous membrane was very red, seemingly intensely inflamed. This condition of the mucous membranes extending far down into the lungs, led us to suppose that death took place from the intensity of the inflammatory action.

This is, so far, all my experience upon the subject of tracheotomy in croup. The operation is a difficult and an anxious one to the surgeon, and an appalling one to the by-standers; yet the immediate and perfect relief afforded by it, for a considerable space of time, in these two cases, which are all that I ever saw, has influenced me much in its favor. I shall not shrink from its performance in the next favorable case that presents itself. Such is, I know, the opinion of most if not of all who witnessed its performance in these two cases.

ON THE STRUCTURE OF POLYPI OF THE FEMALE URETHRA.

[Read before the Biological Society of Paris, by Dr. A. VERNEUIL. Translated from the *Gazette Médicale de Paris*, for the Boston Medical and Surgical Journal.]

THE external orifice of the urethral canal in women is frequently the seat of a pediculated growth, which has for a long time, and in all the books, been designated by the name of polypus of the urethra. These tumors all resemble each other very exactly; they are generally of small size, and of a very deep red color; the enlarged portion projects beyond the meatus, while the pedicle, more or less elongated, is sometimes inserted into the circumference of this orifice, sometimes adheres a little more deeply to the interior of the canal, without, however, exceeding a few lines in this direction. These little growths sometimes bleed freely, but they are chiefly remarkable for the very acute pain with which they are accompanied, not only during micturition, and when they are touched, but also during coitus, which they sometimes render extremely painful. The whole vulva may become painful, and these symptoms, which correspond inadequately with the anatomical

condition, explain why patients early seek advice, and demand the extirpation of the tumor, which is very easily performed.

M. Gosselin having recently removed one of these little growths, which was seated on the right side of the urethral orifice, I made an anatomical examination of it. The tumor is flattened transversely, of a very bright red color, and soft to the touch; after the section of the pedicle, which is very vascular, it became much more pale. After shrinking, it measured 6-100 of an inch in thickness by about 3-10 of an inch in its longest dimension. The surface at first sight appears smooth, but viewed with a lens, it is somewhat mammillated, especially on the edge which unites the two lateral faces. The pedicle, which is of the size of a small goose-quill, is composed of three or four enlargements or lobules, more or less separated from each other, which by their union make up its mass. Examined by a low magnifying power, the tumor is easily seen to be of a papillary nature; it is formed by an agglomeration of cylinders, crowded together, terminated by rounded extremities, and adherent by their bases, just as the fingers of the hand are to the metacarpal region. The papillæ, whose breadth is about the 1-100 part of an inch, have also secondary lateral prolongations, which are much smaller. The external surface is covered with a tolerably thick layer of cylindrical epithelium, formed of little cells containing nuclei, and closely united together. These cells are placed perpendicularly to the surface of the papillæ, like the pile of velvet, giving a certain elegance to the specimen. The body of the papilla is traversed by a very large number of capillary vessels, whose loops, filled with blood, are the cause of the deep color of the tissue. These capillaries, interlacing in different directions, are large, with their walls, and here and there somewhat dilated. They approach the neighborhood of the surface, being only separated from the epithelial covering by a thin layer of the tissue of the papilla. This tissue, which is observed with difficulty on account of the vessels, presents a fibrous appearance, of slight density. The loose meshes of the tissue are filled with an abundance of liquid and of amorphous matter, which explains the shrinking of the tumor into a very small volume by drying. The circumstance that these tumors are the seat of very acute pain induced me to search with great care for nervous filaments, but I was not able to discover any.

In fine, the polypi of the urethra in women appear to me to belong anatomically to the class of papillary hypertrophies, and to that variety which is so remarkable for the great development of the vessels. This opinion is confirmed by the pediculated form, so common in these alterations, in which they resemble the papillary vegetations which we often find in the external genital region of both sexes.

This fact completes the series of alterations of this kind, observed upon all the mucous membranes which are provided with

papillæ. The polypi (an inappropriate name, derived merely from the external configuration) of the urethra belong, then, to the class of warts, of condylomatous vegetations of the prepuce, the glans and of the margin of the anus, of certain pediculated tumors of the tongue, lips, nostrils, conjunctiva (palpebral granulations), vagina, interior of the neck of the uterus, gums, &c.; in a word, of those papillary hypertrophies which are so common, so analogous, and whose history will soon require to be written.

From the study of this structure it is easy to account for the progress of the disease, its possible recurrence, the success which follows its extirpation either by incision or by the ligature, and for the necessity there is of cauterizing the point of implantation in certain cases. Here, as elsewhere, normal and pathological anatomy illustrate the problem of the nature, seat and evolution of the disease.

While speaking of the affections of the female urethra, I wish to notice a disease which I have not seen described by authors. I mean hypertrophy with thickening of the mucous membrane throughout the urethra, or at least in a great part of its extent. I have observed this disease in a lady of about thirty years of age, who had a large fibrous tumor of the uterus. In the region of the meatus urinarius was perceived a well-defined swelling, on the summit of which was the meatus. This projection, which was quite firm to the touch, was composed of the thickened walls of the urethra, the mucous membrane of which projected in a sort of hernia, somewhat comparable to a prolapsus of the rectum. The cavity was almost effaced by the enlarged folds of the mucous membrane, but was sufficiently dilated to admit the end of the little finger. The membrane was red, tolerably firm, and was thrown into convolutions, or thick folds, separated by deep sulci. This affection was not very painful, though it sometimes caused smarting during micturition. It commenced a great while ago, and increased very gradually. It had resisted various kinds of treatment, and I employed no especial means for its relief.

CASE OF IMPERFORATE ARCH OF THE AORTA IN WHICH THE
ROOT OF THE AORTA WAS RUPTURED.

BY T. A. BARKER, M.D., PHYSICIAN TO ST. THOMAS HOSPITAL.

A MAN aged 24, supposed to be in good health, was suddenly attacked, while lacing his boot, with severe pain in the chest, followed by great dyspnoea. He was supposed to have pericarditis. In about a fortnight he came to the hospital much easier, and was said to be convalescent. There was extended cardiac dullness; no heart sounds; and no impulse, except to the right of the sternum. He died suddenly the next day. The coats of the aorta were not diseased, but it was very greatly dilated from the aortic

valves to an inch below the innominata. Just below the ductus arteriosus it was completely closed by congenital malformation. There were two recent lacerations of the aorta, close to its origin, and through these blood had become infiltrated into the substance of the heart; this had excited pericarditis, as was shown by a thick layer of shaggy lymph; and death had ultimately been caused by rupture of the visceral pericardium, and the escape of a considerable quantity of blood into its sac. The subclavian and internal mammary arteries were much enlarged.

Dr. Edward Stephens, of Manchester, had once met with a somewhat similar case to that related to the Society. It had every appearance of being congenital, inasmuch as there was no evidence of the existence of a previous inflammatory state. There was no tumor nor appearance of compression, but it seemed as though the aorta had been tied with a fine piece of whipcord just beyond the ductus arteriosus. The impression on his mind was that some natural tendency had existed for constriction to have occurred at that particular part. On examination, the infra-scapular artery was found to be of an unusual size. The injection had not been so successful as he could have wished, but he thought there must be some obliteration of the aorta. The structure of that vessel was, however, complete and perfect, and the arch was only slightly dilated, the collateral circulation being carried on entirely by the supra-intercostal, the internal mammary, and the subscapular arteries. The internal mammary, he was going to say, seemed almost the size of the bronchial, but certainly the supra-intercostal was quite as large. The collateral circulation had evidently been carried on for many years, and the patient was in a perfect state of health. He was a working butcher, accustomed to carry heavy weights, and fell dead whilst carrying a basket of meat. On examination after death, a rupture of the aorta was detected within the pericardium. The heart itself was only slightly hypertrophied, but the aorta had given way in a singular manner. Probably a day or two before the fatal event, the internal and middle coats had become ruptured. The blood had insinuated itself between these coats and the external pericardial covering of the vessel, which was therefore considerably enlarged. In consequence of this weight, the pericardium had given way more than an inch distant from the rupture of the internal and middle coats, and the pericardium was distended with about a pound of blood. There was no valid reason to suppose that any previous disease had existed at the point of rupture.

Dr. Maclachlan would have been glad to have inquired of Dr. Barker, whom he regretted was not present, whether the case before them was not really one of dissecting aneurism of the aorta. The point at which lesion took place was exactly at the usual site; and it was well known that in these cases the vessel at the point of rupture was frequently perfectly sound. In a similar case

which he had under his care some years since, the rupture was found to extend almost entirely round the vessel. Immediately above the valves there was a clean cut as if it had been made with a knife. In the case before the Society, the effused blood appeared to have been bound down in the ordinary manner by that portion of the pericardium which covered the aorta. When this gave way, pericarditis resulted. The case altogether appeared to be one of a common character.

Dr. Barclay begged to observe, that the author of the paper had stated that when he cut across the aorta he came to a part where there was only a very small hole, sufficient only to admit a probe, and he doubted whether there had not been at that point a complete obstruction of the vessel.

Mr. Skey remarked, that he had been desirous to call the attention of some of the speakers to the circumstance mentioned by Dr. Barclay. It was clear that some obstruction existed. A case of a similar character had occurred in his practice some years since. The patient was a stout, but very healthy woman, about forty-five years of age, but whose death was not sudden. He scarcely adduced it as a case of rupture, and referred to it merely as evidence that rupture was not inevitable in such obstruction. The circulation was carried on in a very remarkable manner. The bronchial arteries were supplied by the inferior thyroid, and the obstruction was complete at the point of junction of the ductus arteriosus and the aorta. In this case there was, doubtless, some relation to original development; and there were, moreover, a number of peculiarities in it which formed a parallel with those mentioned by Dr. Stephens. The rupture was, in both cases, the result of obstruction, more or less complete, in the arch of the aorta.—*London Lancet.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

MAY 28th.—*Delirium Tremens; unusually rapid Fatal Termination.* Case reported by Dr. MORLAND.

"W. C. C., employed in a wholesale liquor store, in this city, 34 years old, below the medium height, but very stout, broad-shouldered and thick-set, with unusual muscular development, coarse, heavy features and thick, crisp, black hair, sent for me at 4 o'clock, A.M., of Friday, May 18th. His condition and history were as follows:—He was in bed, and complained of constant dull pain across the middle of the abdomen, together with persistent nausea and occasional violent retching and vomiting; which latter act brought little but glairy mucus from the stomach—he having eaten little or nothing for some days. His statement was that, about a week previously, he had eaten immoderately of lobster, which disagreed with him. The consequent

indigestion was followed by obstinate diarrhœa, which lasted for two or three days. For four days, he had had no passage, whatever, from the bowels. On palpation and thorough examination of the abdomen, I could detect no evidences of hernia, a suspicion of which at first crossed my mind. The whole abdomen, however, seemed to be distended, yet it was not tympanitic on percussion. The extreme corpulency of the patient was remarked at this time. Copious enemata of soap and water, with olive oil, were directed; to be repeated until full action of the bowels was obtained. Three hours afterwards, I found the patient dressed and sitting up, with a smile on his countenance, wholly relieved from every uncomfortable symptom, and saying that he felt perfectly well, and inclined to eat some breakfast. The pulse was regular, the skin natural, the mind perfectly clear, and there was no restlessness. He had, it is true, slept none the previous night, but this was referred by himself and attendants, and naturally by me, to the constant abdominal pain and nausea. The enemata had acted very powerfully, producing several copious evacuations. So entirely was the patient relieved, and such complete absence was there of any complaint or symptom, that I had no intention of again visiting him. A messenger, however, desired my attendance, about the middle of the afternoon, next day, and stated that C— appeared to be 'out of his head,' and had slept none the previous night, nor in the day. I found him affected with incipient *delirium tremens*, the symptoms being distinct though mild. He was lying down, dressed; there was an evident restlessness, and some slight, occasional tremor of the hands; he was pleasantly garrulous, inclined to joke, but suspicious and apprehensive of harm; there were no hallucinations, either agreeable or disagreeable; he fidgeted with his fingers at times, and looked vacantly from one person to another. No pain of any kind; pulse natural, skin moist, pupils of the eyes natural. Thinking that sleep might be induced by an ordinary dose of morphia, I administered an eighth of a grain, and directed the repetition of the same amount if no sleep was procured in two hours. After my visit, he was removed about half a mile, to his own lodgings—having been, previously, with a friend—and of course there was little chance for sleep. The second dose of morphia was given in the evening. There was no sleep during the night. Owing to a new set of attendants having the care of the patient, I was not called to see him until 5½ o'clock on Sunday morning, although he had been growing worse all night. Summoned, at this time, by one of his former attendants, I found him in a state of the wildest delirium. He had been allowed the range of two large rooms in his lodging-house, and had appropriated four beds—going alternately from one to the other. His mind was fully possessed by the most various hallucinations; he saw a large negro in one corner of the room, then two children in one of the beds, together with animals, &c. &c. He persisted in lying on the extreme edge of the bed—under the idea that others were in bed with him—and once or twice fell out. His terror of imaginary objects was at times extreme. When spoken to, however, he knew his friends, and was not inclined to be violent towards any one. I persuaded him to get into bed, and stationed two persons to retain him therein, by gentle means; gave him fifty drops of laudanum, and remained with him over an hour. The eyes were widely opened, the pupils somewhat dilated. At the expiration of an hour, twenty-five drops more of lau-

danum were given. He was now so quiet, that I allowed the two watchers a respite, and sat by him. By persuasion he was induced to lie still, and seemed to be, for some ten minutes, in a troubled sleep. He then became restless again, but was far more quiet than before taking the laudanum. I left him, with directions to give him wormwood tea to drink, and gruel if he would take it; and in about two hours and a half saw him again. His state was the same. He had been drinking the wormwood with avidity, and probably too freely, as, on giving him twenty-five drops more of laudanum, he immediately vomited a large amount of liquid. He was again left, with directions to the nurse to soothe, and have him very gently restrained; nothing to be given for an hour and a half, when twenty-five drops more of laudanum were ordered, if no sleep occurred previously. Ice could not be kept upon his head, but cold lotions were applied to it, much to his comfort. Before the expiration of the time mentioned, Dr. Gray saw him, by the request of a friend who was not aware that he had been regularly attended from the first, and finding him in a very violent state, prescribed two teaspoonfuls of laudanum. Vomiting occurred about an hour subsequently, but it is fair to conclude that the medicine was mainly absorbed.

"Ascertaining that I was in attendance, Dr. Gray called and communicated the above facts, and we visited him, together, at 3½ o'clock, P.M. He had had no sleep; it required four or five men to restrain him; he was engaged in an imaginary prize-fight, and did not cease to shout and struggle as if in an affray, calling the names of Heenan and Sayers, and using all the phrases of 'the ring.' Again he would scream out that 'they were sticking knives in him.' He was at this time very pale, streaming with perspiration, the pupils largely dilated, and the lips blue; yet his strength was such that it required several men to keep him on the bed. I had previously suggested the administration of ether, but it had been decided that it was best to give the opium-treatment a fair trial. Brandy had also been suggested—that, on inquiry, proving to have been his habitual stimulant—but the irritable state of the stomach, and the wish to get him under the influence of opium, had induced us to abandon this means, as well as the use of ether. It was therefore decided to give an enema of laudanum, and two teaspoonfuls were thrown up the rectum. Without coming, in the least, under the influence of the narcotic, but continuing to struggle and fight with his fancied opponents, he gradually grew more and more exhausted, and died very quietly at 5¼, P.M. There was no approach to coma, and not more than ten or fifteen minutes were occupied in the collapse—that is, the period between the fiercest delirium and death.

"A proposition for a *post-mortem* examination was not acceded to.

"It was ascertained, on the first manifestation of the disease, that the patient had been for a long time in the habit of drinking brandy, frequently, every day. One of the employés of the store in which he worked, stated that he took some as often, on the average, as *every hour* during business hours; and undoubtedly he drank it at other times. He was never known, however, to be intoxicated; and was always fit for his duties and very active. The brandy was stated to have been always of the best quality. Formerly, he had taken ale very freely, but not of late.

"For about a week or ten days prior to the attack, he had not used

any stimulant whatever; and this, in conjunction with his illness and consequent low diet, afforded one of those opportunities seemingly taken advantage of by the disease for its onset. Late writers, it is true, believe that the suspension of the accustomed stimulus has no influence in developing an attack of delirium tremens;* but that alcohol is a cumulative poison, and the disease will break forth when the system can endure no more. Cases, however, must be constantly familiar to practitioners, in which the sudden cessation of the wonted stimulus has seemed to be the distinct exciting cause of the attack—at all events, something more than mere coincidence. The extreme irritability of the patient's stomach was the chief reason for not having recourse to small amounts of his favorite stimulus, and which otherwise would have been at least admissible, if not distinctly indicated. Although antimonials and nutrients are now the means recommended by high authority, yet those who prefer them are occasionally obliged to give stimuli. (See Bennett's *Lectures on Clinical Medicine*; Delirium Tremens.)

"The points chiefly noteworthy in this case, are the sudden development, rapid course, and promptly fatal termination of the attack, and the resistance offered to the very considerable amounts of the preparations of opium administered. One quarter of a grain of the sulphate of morphia was given on Saturday afternoon and evening; seventy-five drops of laudanum, within two hours, on Sunday morning (not counting the twenty-five drops probably ejected by the emesis mentioned); two teaspoonfuls about two hours and a half after the seventy-five drops; and two teaspoonfuls, by enema, at 3½ o'clock, P.M.; making, in all, about twenty-four grains of opium given within twenty-four hours; and on Sunday alone, from about 6 o'clock, A.M. to 4, P.M., twenty-one grains—all without any really noticeable effect.

"It may also be remarked, that it is uncommon for a first attack—which this was—to be so extremely violent in its manifestations, and to terminate fatally—especially in so short a time."

Dr. UPHAM observed that in this disease the patient had reached a point at which his nervous force was expended to its utmost limits, and that death must occur, in extreme cases, unless sleep, or a state similar to it, could be procured, to allow time for its recuperation. He had had an experience of one or two years, in this disease, at the House of Correction at South Boston. He remembered a case which occurred there, precisely similar to the one reported by Dr. Morland, in which the inhalation of ether was resorted to with marvellous effect. The patient slept for eight or ten hours, then, after a short interval, slept again, and awoke recovered. The case was printed in the *Boston Medical and Surgical Journal*, and is the first published case of the treatment of delirium tremens by the inhalation of ether. It had been reprinted in England, where it was characterized as a rash American experiment, although the practice had now become common enough.

Dr. AYER had often employed the inhalation of ether for this disease.

* Dr. Peddie, of Edinburgh, is cited by Dr. Bennett (*Clinical Lectures*, Second Edition, New York, 1858, p. 412) as having "shown that the disease is seldom observed in our prisons, notwithstanding the large number of confirmed drunkards admitted there and immediately placed upon low diet." (See, also, *Monthly Journal of Medical Science*, June, 1851.)

He remembered three cases in which it was successful, after opium had been given in vain. It does not always succeed, but it is more successful, in his opinion, in allaying the paroxysms, and in the induction of sleep, than any other treatment, and he always employs it now. He considered it the most valuable remedy now known. The delirium has a tendency to run a course.

Dr. H. K. OLIVER had once seen ether tried with fatal effect, while he was a house-pupil at the Hospital. The patient was a stout, and apparently healthy man. He was noisy, but not very violent. The case, however, was considered a grave one, and an unfavorable prognosis was given to his friends. Soon after coming under the influence of the ether, his breathing became short and gasping, though the pulse was good. The ether was removed, but in a few seconds the pulse became very small and quick, and the man died. The lungs were found to be engorged, and the blood was everywhere black.

Dr. PARKS asked why it was necessary to administer any specific remedy? A large number of cases do well without any particular treatment. He alluded to the opinion of Dr. Ware, that opium appears to exercise an unfavorable effect on this disease.

Dr. MINOR asked if any gentleman had tried strong coffee in the treatment of this disease? A former house-pupil at the Hospital, who had seen much of the disease, had great faith in its efficacy, as had also the nurse who took charge of the delirium tremens patients. It is given in the quantity of two quarts in twenty-four hours. He also alluded to the treatment by the oxide of zinc, so strongly recommended by Dr. Marcet.

Dr. C. E. WARE had given strong coffee to a patient in the Hospital lately, with apparent good effect. The case was one of moderate severity.

Dr. WARREN said he had been struck with the inefficacy of specific remedies in delirium tremens. The treatment he had usually found to be the most useful, was to give small quantities of spirits, at regular intervals, and some animal broth if it could be borne, allowing the patient at the same time to drink freely of wormwood tea, and, in case of violence, to have him strapped down in the bed, and carefully watched. The disease appears to have a course, so far as sleep is concerned, of four or five days, which no treatment will abridge, and which is more likely to be aggravated than relieved by the use of opium or other narcotics.

Dr. H. J. BIGELOW said if the disease were the result of disordered function of the brain, it cannot be cured by narcotizing the muscular system. It is true that nature is exhausted by protracted wakefulness and muscular effort, and that it is very desirable to avert or terminate such a condition if it can be done without doing other harm; but ether and opium, long continued, of themselves depress the tone of the system, and cases of fatal delirium tremens have been reported, where death was accelerated by their use. He thought patients got along as well under treatment by the straight jacket, with a little spirit, as by any other.

Dr. HOOKER had employed the inhalation of ether to a considerable extent at the House of Correction at East Cambridge, but generally with only a temporary effect. It requires to be kept up a long time. He had long since abandoned the opium treatment as worse than use-

less. His method was very much like that of Dr. Warren, consisting of stimulants in small quantities, with tonics and nourishment.

Dr. GAY related the case of a man whom he frequently saw when attacked with this disease. He was accustomed to drink a pint and a half of spirit daily during the attack, sometimes a quart in twenty-four hours, of rum, whiskey or brandy, having tried all opiates and sedatives in vain, even to the amount of an ounce or more of laudanum in twenty-four hours. During the attack, he eats mince-pie, baked beans, pork, &c., in large quantities. In a few days, nausea and burning at the stomach come on, the delirium ceases, he stops drinking, and two days afterwards he is out and about his business. The only thing that ever quiets him is laxative medicine. The case, however, is not perfectly regular in all its symptoms; the patient is tremulous, but not violent, constantly restless, most of the time in a cold perspiration, and without any sleep for four or five days. There is frequent complaint of severe pain on the top of his head, with a feeling as if it would suddenly burst. He slaps this part of the head every now and then with his hand. At times his head seems to him perforated with billions of small pin-holes, out of which issue streams of fire or water. On closing his eyes, he sees lizards, snakes or toads crawling upon him, or thinks, in the place of his own head there is upon his shoulders that of a pig, alligator or snake; again, he sees savages covered with blood coming towards him, men as large as elephants, with their mouths wide open, and with drawn swords, eager to kill him, devils, and very many disgusting sights. Another patient, who is violent during the attacks, takes ether and opiates with temporary effect, but does not sleep before the end of five days. Dr. G.'s experience has led him to believe that delirium tremens is a self-limited disease, some of whose symptoms may be ameliorated, but whose course cannot be arrested.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 28, 1860.

QUARANTINE AND SANITARY CONVENTION.—In our last number we published a sketch of the proceedings of the Quarantine and Sanitary Convention, a mere business record, an index, as it were, of the labors of those assembled. It necessarily appeared in that form, as not a moment was allowed for the preparation of a paper which would perhaps have been more readable, and would, at the same time, have given a better idea of the work performed.

Any one, however, on glancing at the subjects which attracted the attention of the Convention, will see that its members are inquiring into many abuses, and laboring in a much wider field than that which they originally occupied. Formed, a number of years since, for the purpose of discussing important questions of quarantine, the Association is now extending its labors over the whole domain of sanitary science. In a country so vast as ours, it was absolutely necessary that there should be some common understanding in regard to quarantine, and that the laws which regulated it should be based upon the

scientific knowledge of disease, instead of owing their origin to ignorance, prejudice and terror.

But it was soon felt that even this great question was subordinate to that of civic hygiene, that while so much thought was expended upon the means for preventing the entrance of disease from abroad, every city was actively engaged in breeding it at home. Here, then, is the great field for inquiry, and no extensive knowledge of sanitary matters is necessary to enable us to show conclusively, that a neglect of the most obvious precautions lies at the bottom of much of the disease and death, which are the distinguishing features of some quarters of our large cities.

In the report on Civic Cleanliness, presented by Lieut. Viele, of N. York, the questions of drainage, paving, a supply of water and sewerage, are treated in an admirable manner.

Though no report was presented by the Committee on Tenement Houses, one is in course of preparation, and will, undoubtedly, when it appears, shock us by its exposure of an almost incredible amount of crime, disease and death, all preventable, and all resulting from a reckless disregard of human comfort and human life.

Some years since, the subject of model houses attracted attention, and buildings were constructed, under the auspices of a number of our philanthropic citizens, whose aim it was to furnish the comforts of a home to persons of limited means. To secure the co-operation of others, and the continuation of what they believed to be a good work, they endeavored to make these buildings pay a fair per centage, and were successful. As might have been anticipated, the last result did not fail to attract the attention of men, who needed no other argument for acting. Disregarding all thought of air and light, they calculated that a large collection of dark, noisome dens, under a single roof, must pay even better than comfortable apartments, and we have, accordingly, seen erected in various parts of our city huge structures covering every available inch of ground, and infinitely worse than the buildings formerly occupied by the poor. Those might have been stables, workshops or warehouses, but, not being intended originally for the habitations of men, did not show the same marks of diabolical calculation.

We have just been through a panic excited by the prevalence of a disease among cattle. The legislature has been convened, money appropriated and commissioners appointed, with a view of checking, at any cost, the spread of the pestilence. The greatest indignation is excited by any act, which places in jeopardy the four-footed property of our people. If a man could be proved to have disregarded the precautions thought necessary for the safety of his neighbor's cattle, he would be in danger from a mob, certainly from the law. Yet, we are told, nothing can be done to purify the plague-spots in our midst, which have a perennial life, and are daily multiplying.

SYDENHAM SOCIETY'S PUBLICATIONS.—We are requested to say that notice has been received by Dr. Salter, the Local Secretary of the Sydenham Society, that full sets of the publications of the new Sydenham Society for 1859 have been shipped at London, and may be expected soon at Boston. It will be borne in mind that in order to avoid de'ay in the reception of the books, in the future, members must comply with the rules of the Society. The year commences on the 1st of January, and the subscription, \$5.25, is payable in advance.

NEW MEDICAL JOURNAL.—We have received the first number of the *American Medical Times*, edited by Dr. Stephen Smith, with whom are associated Drs. Elisha Harris and George F. Shrady. In its general appearance it is equal to the best London weeklies, and reflects great credit upon all concerned. We are glad to find such full reports from the various New York Hospitals.

DR. CHARLES HEISCH has recently been making investigations into the disputed question of arsenic-eating in Styria, regarding which it is so difficult to obtain any information, as the greatest secrecy is observed by the arsenic-eaters. They obtain it in an illicit manner from the Tyrolese, as it is difficult to procure it otherwise, the law prohibiting its purchase without a doctor's certificate. But Dr. Heisch has now settled beyond further dispute that arsenic is really eaten by the Styrian peasantry, and that, too, in the most incredible quantities. One person who confessed its use, commenced with three grains *per diem*—a dose we should consider fatal—and gradually increased it, till now, in his forty-fifth year, he takes *twenty-three* grains of pure white arsenic in his coffee daily! The complexion is said to be much improved, and the countenance made to appear exceedingly juvenile by the use of this potent drug. The woodmen and hunters of the Tyrol also take it to improve their wind and prevent fatigue. As a rule, the arsenic-eaters are very long-lived, but invariably die suddenly at last. The effects of leaving it off when one is once accustomed to its use, almost equal in horror those which De Quincey narrates as the result of his leaving off opium.—*New York Daily Times*.

THE *Journal de Chimie Médicale* contains an account of the discovery of a new and powerful sedative in neuralgia, just discovered by Dr. Field. The substance used is nitrate of oxyde and glycile, and is obtained by treating glycerine at a low temperature with sulphuric or nitric acid. One drop mixed with ninety-nine drops of spirits of wine constitutes the first dilution. It has been tried upon animals and patients with remarkable effect. A case of neuralgia, in an old lady, which had resisted every known remedy, was completely cured by this new agent. It has also been tried in dental neuralgia with equal success.—*Ibid*.

AMPUTATION AT THE HIP-JOINT was performed by Professor Pancoast, on the 13th inst., on a patient in the Pennsylvania Hospital, who was suffering from a large fungus hæmatodes of the thigh. Only a few ounces of blood were lost during the operation, and the patient so far is doing well.

Dr. Kowasaki Downing, of the Japanese Embassy, was present during this and several other operations.—*Med. and Surg. Reporter*.

THE SUCCESSOR OF HUMBOLDT AT THE ACADEMY OF SCIENCES.—Professor Ehrenberg, of Berlin, has just been appointed Foreign Fellow of the Academy of Sciences of Paris, in place of the late lamented Humboldt. M. Ehrenberg had 30 votes out of 56, and Liebig 21. The other candidates were Messrs. Airy, of Greenwich; Agassiz, of Boston; De la Rive, of Geneva; Liebig, of Munich; Martius, of Mu-

nich; Murchison, of London; Steiner, of Berlin; Struve, of Pultowa; and Wöhler, of Göttingen.—*London Lancet*.

ENORMOUS HYPERTROPHY OF THE SPLEEN.—M. Sappey lately showed to the Biological Society of Paris a spleen which had reached the following dimensions: length, 13 inches; breadth, 9 inches; thickness, 5 inches. The total weight was 14lb. 4oz. By taking the average of ten normal spleens, the author has found that the ordinary weight is 6½ ounces. M. Sappey thinks that the spleen here spoken of is the largest on record, and adds that those mentioned by authors as having reached 15, 18, 20, and even 43 pounds in weight, were not simply hypertrophied, but were cancerous or cartilaginous, &c.—*Ibid*.

MEDICAL APPOINTMENTS, &c.—Dr. S. W. Gross has been appointed one of the Surgeons of the Howard Hospital, to take the department of Diseases of the Genito-Urinary Organs. Dr. Charles Neff has been appointed one of the Surgeons, with the department of General Surgery.—A Board, consisting of Surgeon C. McDougall, Assistant Surgeons J. F. Hammond and J. Campbell, Medical Department, assembled at West Point, N. Y., on the 11th of June, 1860, to examine into the physical qualifications of the candidates for admission into the Military Academy.

A MODEL for the proposed statue to John Hunter has been presented by Mr. Milnes, of London, but no one has yet been selected as that to be used by the sculptor, who also as yet remains undecided upon.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JUNE 23d, 1860.

DEATHS.

	Males.	Females	Total.
Deaths during the week,	45	40	85
Average Mortality of the corresponding weeks of the ten years, 1850-1860,	35.5	31.3	66.8
Average corrected to increased population,	76.2
Deaths of persons above 90,

Mortality from Prevailing Diseases.

Consumption.	Croup.	Scarlet Fever.	Pneumonia.	Measles.	Smallpox.
13	2	5	7	3	1

METEOROLOGY.

From Observations taken at the Cambridge Observatory.

Mean height of Barometer,	30.021	Highest point of Thermometer,	81°
Highest point of Barometer,	30.160	Lowest point of Thermometer,	53°
Lowest point of Barometer,	29.722	General direction of Wind,	S. W. and Easterly.
Mean Temperature,	63° 5	Whole amt of Rain in the week	3.04 in.

BOOKS RECEIVED.—On Diseases of the Rectum and Anus, &c. By T. J. Ashton, London. Philadelphia Edition. (From Brown & Taggard, Boston.)—Treatise on Diseases of the Lungs, &c. By W. H. Walshe, M.D., London. Philadelphia Edition. (From Brown & Taggard, Boston.)—Annual Address before the Convention of the Connecticut Medical Society, May 23d, 1860. By Ashbel Woodward, M.D.

MARRIED.—At Brunswick, Me., 4th inst., H. C. White, M.D., to Miss Mary L. Randall, of Harpswell, Me.

Deaths in Boston for the week ending Saturday noon, June 23d, 85. Males, 45—Females, 40.—Accident, 1—apoplexy, 1—inflammation of the brain, 1—bronchitis, 1—cancer (uterine), 2—consumption, 13—croup, 2—dysentery, 1—dropsy in the head, 4—debility, 2—infantile diseases, 5—puerperal disease, 1—epilepsy, 1—erysipelas, 1—exhaustion, 1—scarlet fever, 5—typhoid fever, 2—hemorrhage of the bowels, 1—disease of the heart, 2—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 7—lupus exedens, 1—marasmus, 2—measles, 3—mortification, 2—old age, 1—palsy, 4—pleurisy, 1—scalded, 1—smallpox, 1—teething, 1—inflammation of the throat and œdema of the glottis, 1—tubercular meningitis, 1—tumor, 1—unknown, 6.

Under 5 years, 35—between 5 and 20 years, 10—between 20 and 40 years, 16—between 40 and 60 years, 15—above 60 years, 9. Born in the United States, 58—Ireland, 17—other places, 10.